

LESSON PLAN

JOURNALING

[Craters of the Moon National Monument & Preserve](#)



Students climbing a volcano

SUBJECT:

Ecology, History, Writing

DURATION:

4-5 hours

GROUP SIZE:

60 or more

SETTING:

Outdoors

NATIONAL/ STATE STANDARDS

CCRA.W.3, NGSS.SEP.8

OVERVIEW

Students enhance their learning experience at Craters by using a Student Journal while on their field trip. (FIELD TRIP ACTIVITY)

OBJECTIVES

Students will be able to determine the amount of time their bus journey would have taken had they walked or ridden a horse or wagon.

Students will record their thoughts, art, observations, etc. in their personal field journal.

Students will record the places they visited while on their tour of Craters.

Students will draw a Craters ecosystem and label its living and non-living parts.

BACKGROUND

The Student Journal is intended to focus the students' learning while they explore Craters of the Moon. It will help to reinforce the knowledge they have already gained through their classroom study of Craters geology, cultural history, and ecology. Upon returning to the school, the teacher can instruct the students to refer to their Journal notes for further Craters exploration. The Student Journal is for the students to keep and may be the only tangible thing they have from their visit to the Monument.

From the Teacher's Guide to Craters of the Moon.

MATERIALS

[Student Journal](#)

[answers](#) to Craters Bingo

PROCEDURES

Part 1:

Print out a copy of each page and make back to back copies of the Student Journal on 8.5" X 11" paper, fold them in half, and staple together.

Go over the Journal with the students page by page before leaving on your field trip so the students will be prepared for the small amount of "book work" they must do once they are at Craters.

Part 2: Craters Travel Times

The students must get the odometer reading from their bus driver at the beginning of the trip and when they arrive at Craters to calculate the total days of travel the trip would take if

they had to walk, ride horseback, or ride in a wagon.

Part 3: Craters Bingo

Encourage the kids to respond to each of the squares and get a "bingo blackout."

[Answers](#) to Craters Bingo.

Part 4: Field Observations

Suggestions:

Idea #1

From the North Crater Flow Trail have the students observe the differences between the North Crater (a young cone) and Grassy Cone (an old cone). From the trail, North Crater is close and to the south while Grassy Cone is about a mile to the west.

Have students generate a list of differences between these two cones, for example:

North Crater	Grassy Cone
Made of jagged, big rocks	Made of smaller rocks
Jagged outline	Smooth outline
Little vegetation	Covered with plants
Taller	Shorter

Then have them hypothesize why these two cones are different. If necessary, tell them that one cone is 2,500 years old (North Crater) while the other is 7,400 years old (Grassy Cone). Which is which and how do they know? You could instruct students to record their observations now and discuss it once you return to class.

The shape of Grassy Cone and the vegetation on its slopes indicate it has weathered longer and has had more time for soil to develop, or be deposited by the wind; and plants to colonize its slopes.

You might also have the students hypothesize why trees grow on just one side of Grassy Cone. The forest grows only on the north side of Grassy Cone because we live in the northern hemisphere and the sun is always to the south of us. The cone casts a shadow northward, reducing evaporation on the north slope, thereby making life possible for water-loving trees.

Idea #2

Choose an area where students can safely leave the path to closely observe plant life growing amongst the lava (e.g., caves area). Break them into teams and have them randomly choose a plot of lava, about 100

square feet in area, in which some plants are growing. Ask them to make a table as follows:

	Plants growing from crevices and cracks	Plants growing out of bare, flat lava
flowers	<hr/>	<hr/>
shrubs	<hr/>	<hr/>
trees	<hr/>	<hr/>

Beneath each column they would record the number of plants that are growing in the two categories.

Discussion and analysis could be saved for the classroom. What were their findings? Did crevices and cracks support more plant life? If so, how much more? Why would plants thrive better in crevices and cracks? (water and soil is retained there better than on bare rock because there is more shade and less wind).

Idea #3

During the course of the day have the students make specific observations of their surroundings for an article they will write upon returning to class. Encourage them to use all of their senses. What did the area feel, sound, smell, and look like? How did their lunch taste that day? Challenge the students to create metaphors and/or similes for what they experience at Craters.

Instruct the students to keep a record of what they did and where they went. What geological observations did they make? What did they overhear other tourists saying about Craters? What birds and plants did

they see? These specific notes could be used to write an article on their trip to Craters.

ASSESSMENT

Explain a grading policy for the students and/or tell them that their success on future assignments hinges on their thoughtful responses in their Journal.